Some CNS Issues Facing FAA and the Aviation Community

by

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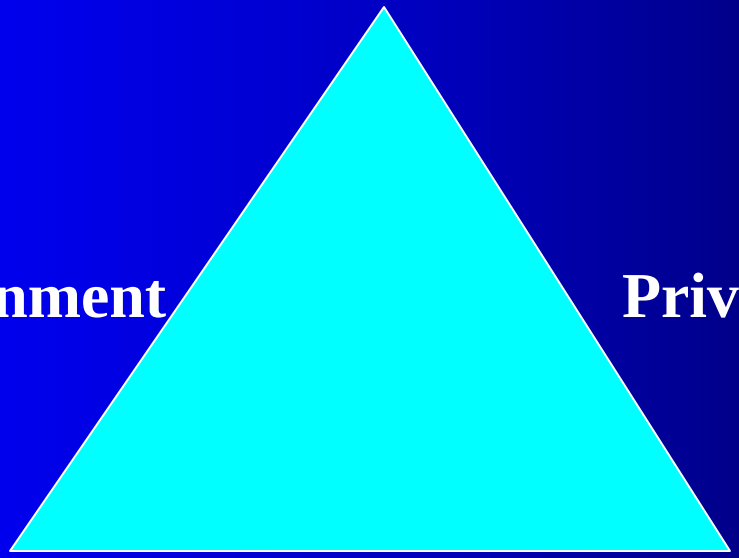
COMMUNICATIONS
VDL Mode 3 vs. 8.33/VDL Mode 2

- Voice communication is critical for ATC
- VHF Spectrum shortage forecast in US airspace after 2009
- 8.33MHz spacing for voice already being used in Europe; US Airlines have invested
- Service suppliers ARINC and SITA are investing in VDL Mode 2 Data Link

- Communications Triangle – How many service providers are needed?
- Aircraft



Government **Private**

- ATC AOC

- VDL Mode 3 brings Digital Technology for both Voice and Data
- Do the benefits outweigh the costs?
- How do we account for the potential of new technology?

NAVIGATION

- What are the relative priorities of WAAS and LAAS?
- What is the backup for GPS navigation?

- Do users want CAT 2 & CAT 3 LAAS approaches as a higher priority than CAT 1 WAAS?
- Do GA and small airports need reduced approach minima with LAAS or is 300 feet and ¾ mile from WAAS sufficient?
- What is the transition/avionics path from ILS to LAAS/WAAS?
- What is the transition path from current procedures to Required Navigation Performance (RNP)?

SURVEILLANCE

Should FAA Invest in Primary Long Range Radar?

- DOD and Homeland Security require primary radar coverage throughout the USA
- Before 9/11 FAA had undertaken to eliminate primary long-range radar; now controllers are on the front line of Homeland Security
- Weather products are now available to ATC from sources other than long-range primary radar
- Are the costs of primary long-range radar a justifiable expense for civil aviation?
- Can ASR-9, ASR-11 and ARSR-4 primary radar coverage be made sufficient to meet our security needs?

CERTIFICATION

CERTIFICATION RIGOR vs. NEW TECHNOLOGY

- A single software radio/avionics box could be built to handle:
  - VHF analog voice – 25 and 8.33KHZ
  - Data Link VDL Mode 2, 3 and 4
  - Transponder – Mode S or SSR
  - ADS-B
  - AOC
- Is FAA prepared to certify such a multi-purpose piece of avionics?